# Tomasz Piskorski

### **Contact Information:**

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#### **Professional Experience:**

Edward S. Gordon Professor of Real Estate (with tenure), Finance Division

Columbia Business School, 2019-present

Edward S. Gordon Associate Professor of Real Estate (with tenure), Finance Division

Columbia Business School, 2015-2019

Associate Professor of Business (with tenure), Finance and Economics Division

Columbia Business School, 2014-2015

Edward S. Gordon Associate Professor of Real Estate, Finance and Economics Division

Columbia Business School, 2011-2014

Assistant Professor, Finance and Economics Division

Columbia Business School, 2007-2011

## **Other Affiliations:**

Research Associate, National Bureau of Economic Research, 2015-present

Academic Research Council, Housing Finance Policy Center, Urban Institute, 2018-present

Fellow, Weimer School of Advanced Studies in Real Estate, Homer Hoyt Institute, 2017-present

Member, Finance Theory Group, 2022-present

Affiliate, Commercial Real Estate Data Alliance, 2017-present

Visiting Scholar, Cowles Foundation at Yale University, Fall 2010

Visiting Scholar, Federal Reserve Bank of Minneapolis, Summer 2008

#### **Education**:

New York University

Ph.D. in Economics, Stern School of Business, 2003-2007

M.S. in Mathematics, Courant Institute of Mathematical Sciences, 2006

Catholic University of Leuven

M.S. in Economics, 2000

Warsaw University

B.A. in Economics, 1999

<u>Fields of Expertise</u>: Real estate, financial intermediation and banking, fintech, proptech, securities and debt markets, market structure and regulation, housing policy.

#### **Publications:**

- "Beyond the balance sheet model of banking: Implications for bank regulation and monetary policy", with G. Buchak, G. Matvos, and A. Seru, accepted at the *Journal of Political Economy*.
- "Shadow bank distress and household debt relief: Evidence from the CARES Act" with S. Cherry, E. Jiang, G. Matvos, and A. Seru, 2022, *AEA Papers and Proceedings* 112, 509-515.
- "Government and private household debt relief during COVID-19" with S. Cherry, E. Jiang, G. Matvos, and A. Seru, 2021, *Brookings Papers on Economic Activity (Fall Edition)*.
- "Mortgage refinancing, consumer spending, and competition: Evidence from the Home Affordable Refinance Program", with S. Agarwal, G. Amromin, S. Chomsisengphet, T. Landvoigt, A. Seru, and V. Yao, forthcoming in the *Review of Economic Studies*.
- "Debt relief and slow recovery: A decade after Lehman", 2021, with A. Seru, *Journal of Financial Economics* 141, 1036-1059.
- "Mortgage market design: Lessons from the Great Recession", with A. Seru, 2018, *Brookings Papers on Economic Activity*, Spring Edition.
- "Fintech, regulatory arbitrage, and the rise of shadow banks", with G. Buchak, G. Matvos, and A. Seru, 2018, *Journal of Financial Economics* 130, 453-483.
- "Policy intervention in debt renegotiation: Evidence from the Home Affordable Modification Program", with S. Agarwal, G. Amromin, I. Ben-David, S. Chomsisengphet, and A. Seru, 2017, *Journal of Political Economy* 125, 654-712.
- "Interest rate pass-through: Mortgage rates, household consumption, and voluntary deleveraging", with M. Di Maggio, A. Kermani, B. Keys, R. Ramcharan, A. Seru, and V. Yao, 2017, *American Economic Review* 107, 3550-3588.
- [Note: This is a combined version of working papers "Monetary policy pass-through: Household consumption and voluntary deleveraging" by Di Maggio, Kermani, and Ramcharan previously revise & resubmit at *American Economic Review* and "Mortgage rates, household balance sheets, and the real economy" by Keys, Piskorski, Seru, and Yao previously revise & resubmit at *Journal of Political Economy*.]
- "Optimal dynamic contracts with moral hazard and costly monitoring" with M. Westerfield, 2016, *Journal of Economic Theory* 166, 242-281.
- "Asset quality misrepresentation by financial intermediaries: Evidence from the RMBS market", with A. Seru and J. Witkin, 2015, *Journal of Finance* 70, 2635-2678.
- "Mortgage modification and strategic behavior: Evidence from a legal settlement with Countrywide, with C. Mayer, E. Morrison, and A. Gupta, 2014, *American Economic Review* 104, 2830-2857.
- "The Inefficiency of refinancing: Why prepayment penalties are good for risky borrowers", with C. Mayer and A. Tchistyi, 2013, *Journal of Financial Economics* 107, 694-714.
- "Mortgage Financing in the Housing Boom and Bust", with B. Keys, A. Seru, and V. Vig, 2013, *Housing and Financial Crisis*, Edward Glaeser and Todd Sinai, editors, NBER and University of Chicago Press.
- "Optimal securitization with moral hazard", with B. Hartman-Glaser and A. Tchistyi, 2012, *Journal of Financial Economics* 104, 186-202.
- "Stochastic house appreciation and optimal mortgage lending", with A. Tchistyi, 2011, Review of Financial Studies 24, 1407-1446.
- "Securitization and distressed loan renegotiation: Evidence from the subprime mortgage crisis", with A. Seru and V. Vig, 2010, *Journal of Financial Economics* 97, 369-397.

- "Optimal mortgage design", with A. Tchistyi, 2010, Review of Financial Studies 23, 3098-3140.
- "Risky human capital and deferred capital income taxation", with B. Grochulski, 2010, *Journal of Economic Theory* 145, 908-943.
- "A new proposal for loan modifications", with C. Mayer and E. Morrison, 2009, *Yale Journal on Regulation* 26, 417-429.

Comment on "Subprime mortgage pricing: The impact of race, ethnicity and gender on the cost of borrowing", *Brookings-Wharton Papers on Urban Affairs*, 59-62, 2009, Brookings Institution Press.

"U.S. domestic money, inflation and output", with Y. Aksoy, 2006, *Journal of Monetary Economics* 53, 183-197.

"U.S. domestic currency in forecast error variance decompositions of inflation and output", with Y. Aksoy, 2005, *Economics Letters* 86, 265-271.

## **Working Papers:**

- "MacroPru in the shadow of declining balance sheet model of banking", with G. Buchak, G. Matvos, and A. Seru, being prepared for the *NBER Macroeconomics Annual 2023*.
- "An equilibrium model of mortgage and housing markets with state-contingent lending contracts", with A. Tchistyi, revise and resubmit at the *Journal of Financial Economics*.
- "Why is intermediating houses so difficult? Evidence from iBuyers" with G. Buchak, G. Matvos, and A. Seru.
- "Banking without the deposits: Evidence from shadow bank call reports" with E. Jiang, G. Matvos, and A. Seru.
- "Banking the unbanked: What do 255 million new bank accounts reveal about financial access?", with S. Agarwal, S. Alok, P. Ghosh, S. Ghosh, and A. Seru.
- "Mortgage rates, household balance sheets, and the real economy", with B. Keys, T. Piskorski, A. Seru, and V. Yao. [featured in March 2015 NBER Digest]
- "Second liens and contractual inefficiencies", with C. Mayer and E. Morrison; policy paper prepared for *Strategies to Improve the Housing Market* initiative.

## **Articles in the Popular Press:**

- "If you want a quick recovery: Forgive debts", with A. Seru, Barron's, April 2020.
- "Banking the unbanked: Is the NDA govt's flagship initiative Jan Dhan Yojana bearing fruit on the ground?", with S. Agarwal, S. Alok, P. Ghosh, S. Ghosh, and A. Seru, *Times of India*, March, 2017.
- "Home Affordable Refinancing Program: Impact on borrowers", with S. Agarwal, G. Amromin, S. Chomsisengphet, A. Seru, and V. Yao, *VoxEU*, October 2015.
- "Private-label RMBS fraud ran rampant before market crash, but who is to blame?", with A. Seru, *HousingWire*, April 2013,
- "Lessons learned from HAMP", with A. Seru, *HousingWire Magazine*, January 2013.

#### **Grants and Awards:**

National Science Foundation Award 1628895, "The transmission from households to the real economy: Evidence from mortgage and consumer credit markets", with A. Seru, 2016-2022. \$514,527

National Science Foundation Award 1124188, "Understanding the determinants of household default decisions", with C. Mayer and E. Morrison, 2011-2015, \$347,811

Jensen Prize (Second Place) for the best paper published in the Journal of Financial Economics in the areas of corporate finance and organizations, 2019

Real Estate Research Institute, 2018

AQR Insight Award (Distinguished Paper Prize) that recognizes research that provides the most significant, new practical insights for tax-exempt institutional or taxable investor portfolios, 2013

*Pew Charitable Trusts* Grant, "Analysis of second liens and new proposal", with C. Mayer and E. Morrison, 2012

## **Professional Service:**

Associate Editor, Journal of Finance, 2021-present

Editor (Finance Area), Management Science, 2016-present

Editorial Board Member, Real Estate Economics, 2015-present

Associate Editor, Journal of Banking and Finance, 2015-2017

Associate Editor, Management Science, 2014-2016

Board Member, Finance Theory Group, 2013-2015

Co-Organizer, NBER Summer Institute Real Estate meeting, 2014-present

Co-Organizer, Summer Real Estate Symposium, 2009-present

Co-Organizer, 9<sup>th</sup> Finance Theory Group meeting, 2013

Co-Organizer, No-Free Lunch Seminar, CBS Program for Financial Studies, 2012-2013

Co-Organizer, Finance Seminar, Columbia Business School, 2008-2009

Program Committee Member, Philadelphia Fed Mortgage Market Research Conference, 2022

Program Committee Member, Utah Winter Finance Conference, 2022

Program Committee Member, Yale-RFS Conference on Real and Private-Value Assets, 2019

Program Committee Member, AREUEA-ASSA annual meeting, 2017, 2021

Program Committee Member, NY Fed and NYU Stern Conference on "Mortgage Contract Design"

Program Committee Member, Society for Economic Dynamics annual meeting, 2015

Program Committee Member, World Congress of the Econometric Society, 2015

Program Committee Member, Financial Management Association annual meeting, 2015

Program Committee Member, European Financial Management Association annual meeting, 2015

Program Committee Member, American Finance Association annual meeting, 2014, 2015, 2016

Program Committee Member, European Finance Association annual meeting, 2014, 2018

Program Committee Member, Western Finance Association annual meeting, 2010, 2011

Refereing: National Science Foundation, Econometrica, American Economic Review, Journal of Political Economy, Quarterly Journal of Economics, Journal of Finance, Review of Financial Studies, Journal of Financial Economics, Review of Economic Studies, Journal of Economic Theory, Review of Economics and Statistics, International Economic Review, Journal of Money Credit and Banking, Journal of Public Economics, Journal of Monetary Economics, Journal of Financial and Quantitative Analysis, Journal of Financial Intermediation, Journal of Urban Economics, Economic Journal, Real Estate Economics, Management Science, Southern Economic Journal, Review of Finance, Journal of Econometrics, Journal of Mathematical Economics.

## **Seminar and Conference Presentations:**

- 2022: Housing Finance Policy Center, American Economic Association, Dealpath, London Business School (scheduled), University of Wisconsin (scheduled)

  Discussant: American Finance Association
- 2021: Wharton, Johns Hopkins University, Federal Reserve Bank of Philadelphia, Bank of England, Hong Kong University of Science and Technology, ITAM, La Trobe University, Dealpath, Brookings Institution, NBER Real Estate meeting, NBER Household Finance meeting, NBER Corporate Finance meeting, Western Finance Association, OECD meeting "Supervisors Responding to the Impacts of the COVID Pandemic, American Real Estate and Urban Economics Association COVID-19 and Real Estate session

  Discussant: American Real Estate and Urban Economics Association Cambridge Corporate
  - Discussant: American Real Estate and Urban Economics Association, Cambridge Corporate Finance Theory Symposium
- 2020: North American Meeting of the Econometric Society, Housing Finance Policy Center, National University of Singapore Discussant: American Finance Association, American Economic Association
- 2019: UC Berkeley; University of Rochester; Imperial College London; Federal Reserve Bank of Boston; Federal Reserve Bank of New York; Bank of Canada; Federal Deposit Insurance Corporation Financial Technology Conference; Housing Finance Policy Center; Summer Real Estate Symposium; Central Bank Research Association Conference; Finance Theory Group Summer School at Wharton on Frictions in Firms and Markets; Citi's Private Company Innovation Summit From Bricks to Clicks: PropTech for Improved Services, Data and Decision Making (moderator)
  - Discussant: Federal Reserve Bank of New York Research Conference on Fintech, American Finance Association; Philadelphia Fed Conference on New Perspectives on Consumer Behavior in Credit and Payments Markets
- 2018: Brookings Institution; Housing Finance Policy Center; Boston College; UNC Kenan-Flagler Business School; Columbia University; University of Chicago 10<sup>th</sup> Anniversary of Financial Crisis Conference; UT Austin Financial Crisis Symposium; European Central Bank Annual Research Conference; US Department of Treasury Office for Financial Research Financial Stability Conference; American Finance Association; American Real Estate and Urban Economics Association
  - Discussant: American Real Estate and Urban Economics Association
- 2017: MIT Sloan; NYU Stern; University of Wisconsin; Consumer Financial Protection Bureau; Columbia University; Baruch College; Rutgers; Homer Hoyt Institute; IIM-NYU Stern India Research Conference; Kellogg Fintech Conference; Philadelphia Fed Fintech Conference: The

- Impact on Consumers, Banking, and Regulatory Policy

  Discussant: American Finance Association; NBER Capital Markets and the Economy meeting
- 2016: Northwestern Kellogg; University of Texas at Austin; NBER Public Economics meeting; University of Chicago Becker Friedman Institute Conference on Housing, Household Debt, and Macroeconomy; Bank of England Conference on Housing: Microdata, Macro Problems; Sovereign Bond Markets Conference on Real and Financial Externalities of Non-Traditional Monetary Policy Tools; UK Financial Conduct Authority Conference on Consumer Choice in Mortgage Markets, CEPR Household Finance Workshop

  Discussant: Minnesota Corporate Finance Conference
- 2015: UC Berkeley; George Washington University; University of Notre Dame; Emory University; Baruch CUNY; Federal Reserve Board; Federal Reserve Bank of New York; Federal Reserve Bank of Chicago; US Treasury; Columbia Business School; Society for Economic Dynamics *Discussant:* American Economic Association; Western Finance Association; NUS-IRES Symposium; Philly Fed Conference on New Perspectives on Consumer Behavior in Credit and Payments Markets
- 2014: AEA/AREUEA Panel on the Role of Regulation in the Housing Market; AFA/AREUEA Joint Session on Information in Real Estate and Mortgage Market; NBER Household Finance: Research Findings and Implications for Policy meeting; EUI Economic Policy after the Financial Crisis Workshop; Columbia Business School

  \*Discussant:\* NBER Law and Economics meeting; NBER Household Finance meeting; American Finance Association; Western Finance Association; NYU Stern and University of Wisconsin Housing-Urban-Labor-Macro conference; Summer Real Estate Symposium
- 2013: NYU Stern; Columbia Business School; University of Illinois; Rutgers Business School; Sveriges Riksbank; National Bank of Poland; NBER Economics of Real Estate meeting; Summer Real Estate Symposium; Red Rock Finance Conference; NYU Economics Ph.D. Alumni Conference; NUS-IRES Symposium; UC Berkeley Conference on Fraud and Misconduct; Global Justice Forum

  Discussant: Western Finance Association (twice); NYU Economics Ph.D. Alumni Conference
- 2012: Northwestern Kellogg; Columbia Business School; PSU Smeal College of Business; IESE Business School; Woodrow Wilson Center; U.S. Department of Housing and Urban Development; Cato Institute; National Bank of Poland; NBER Housing and Financial Crisis meeting; AEA; NYC Real Estate Conference

  \*Discussant:\* American Economic Association; American Finance Association; Western Finance Association; Utah Winter Finance Conference; AREUEA
- 2011: NYU Stern; Michigan Ross School of Business; UNC Kenan-Flagler Business School; Rice Jones School of Business; Duisenberg School of Finance; WFA; Chicago Booth and LBS Colloquium on Regulating Financial Intermediaries; Atlanta Fed and University of Wisconsin Housing-Urban-Labor-Macro conference; Real Estate Circle Academy Discussant: American Economic Association
- 2010: Yale Economics Department (twice); U.S. Department of the Treasury (OCC); NBER Household Finance meeting; FDIC and Federal Reserve System Symposium on Mortgages and Future of Housing Finance; PREA Institutional Real Estate Investment Institute

Discussant: NBER Economics of Real Estate meeting; Wharton Household Portfolio Choice and Financial Decision-Making Conference; Western Finance Association (twice)

2009: NYU Stern; NYU Economics Department; Wharton; Columbia Business School, ASU W.P. Carey School, Texas Finance Festival, NBER Household Finance meeting, NBER Law and Economics meeting; NBER Market Institutions and Financial Risk meeting; NBER Security Design meeting; London Business School Accounting Symposium; London Stock Exchange/MTS Conference on Financial Markets; Chicago Federal Reserve Bank Annual Conference on Bank Structure and Competition; Federal Reserve Bank of Philadelphia Conference on Recent Developments in Consumer Credit and Payments; AREUEA annual meeting; AREUEA mid-year meeting; Society for Economic Dynamics; Latin American Meeting of the Econometric Society; North American Meeting of the Econometric Society Discussant: NBER Capital Markets and Economy meeting; NBER Asset Pricing meeting

2008: Harvard Economics Department; Northwestern Kellogg; Columbia Business School (twice); Federal Reserve Bank of Chicago; Federal Reserve Bank of Minneapolis; Federal Reserve System Conference on Housing and Mortgage Markets; UniCredit Conference on Banking and Finance; Society for Economic Dynamics; Summer Real Estate Symposium; AREUEA; 15<sup>th</sup> Mitsui Life Symposium at Michigan Business School; 3<sup>rd</sup> NYC Real Estate Meeting; American Economic Association *Discussant:* Brookings Institution

2007: University of Chicago GSB; University of Chicago Economics Department; Wharton; Northwestern Economics Department; Columbia Business School; NYU Economics Department; Cornell Economics Department; UC Berkeley Haas; Federal Reserve Bank of Richmond; Duke Fuqua; UNC Kenan-Flagler Business School; Fordham GSB; London School of Economics; NBER Economics of Real Estate meeting; Stanford Institute for Theoretical Economics; University of Wisconsin Real Estate Conference; Summer Real Estate Symposium

2006: UCLA Economics Department; NYU Stern; Federal Reserve Board of Governors; Federal Reserve Bank of Minneapolis; Federal Reserve Bank of New York (twice); Society for Economic Dynamics; London Business School 6<sup>th</sup> Transatlantic Doctoral Conference

## **Teaching Experience:**

MBA PropTech and Real Estate Disruption, 2019-present (course designer and teacher) MBA/EMBA Real Estate Finance, 2008-present

EMBA Executive Ethics, Segment on asset-backed securities and financial crisis, 2018-present Ph.D. Big Data in Finance (Real Estate), 2019-present

Ph.D. Pre-Thesis Seminar, Real estate finance and banking, 2019, 2022

Executive Education, Real Estate Investing, Co-director & Co-developer, 2019-present

Executive Education, Real Estate Investing, Developer, Online program with Emeritus, 2022

Executive Education, Global Banking Program, Segment on Fintech and Shadow Banking, 2022

## **Business Cases:**

"Co-Working at the Turning Point" with Lisa Cations, 2020

"Can iBuying Go the Distance" 2021

## **Selected Media Coverage of My Work:**

Wired, October 2022, "Opendoor's iBuyer model is a canary in the economic coal mine"

Washington Post, November 2021, "Zillow sent its algorithm to take on the housing market. The housing market won"

Los Angeles Times, November 2021, "Zillow just gave up on ibuying. What's the deal with the algorithmic home sales?"

MarketWatch, November 2021, "It's really a toy': How reliable is Zestimate, Zillow's extremely popular home-valuation tool?"

Wired, November 2021, "Why Zillow ccouldn't make Algorithmic house pricing work"

The Business Journals, November 2021, "What does Zillow's abrupt exit from iBuying portend for the direct-homebuying business model?"

KPCC (NPR Affiliate), November 2021, "Are algorithms taking over real estate market"

Quartz, November 2021, "How Zillow got rocked by the housing market"

Tampa Bay Times, October 2021, "How Zillow, other companies buy houses around Tampa Bay"

Input Magazine, October 2021, "Is that viral TikTok about housing market manipulation true?"

Reuters, October 2021, "Vulnerable US homeowners face uncertainty as forbearance ends"

Bloomberg, September 2021, "Zillow's home-flipping bonds draw Wall Street deeper into housing"

Money, January 2021, "Why a third of borrowers in debt forbearance programs are still paying their bills"

Fortune, January 2021, "The lesson lenders learned from the Great Recession: Forbearance works"

Washington Post, April 2020, "Record government and corporate debt risks "tipping point" after pandemic passes"

Bloomberg, April 2020, "Missed rent payments cascade across real estate industry"

Politico, April 2020, "Brace for another grim (but maybe not as grim) jobless claim numbers"

New York Times, June 2019, "Risky borrowing is making a comeback, but banks are on the sideline"

New York Times, May 2019, "Seeking an edge, developers and investors turn to PropTech"

Forbes, July 2017, "Banks that don's invest in technology risk falling behind permanently"

American Banker, July 2017, "Banks' struggles in mortgage business linked to outdated technology"

Seeking Alpha, May 2017, "Fintech and shadow banks" (John Cochrane blog)

Bloomberg, March 2017, "Shadow banking is getting bigger without getting better"

Wall Street Journal, March 2017, "The rise of shadow banks in mortgage lending"

ProPublica, March 2017, "When it comes to Wall Street, Preet Bharara is non hero"

PBS News Hour, November 2015, "Did the nation's largest housing recovery initiative work?"

HousingWire, September 2015, "HARP helped more than 3 million borrowers save \$3,500 annually"

Financial Times, October 2014, "Floating-rate debt is great when interest rates go down"

Washington Post, October 2014, "How mortgage rates affect car purchases, credit card debt, and jobs"

CBS Money Watch, February 2013, "Study confirms widespread mortgage fraud"

Wall Street Journal, February 2013, "New paper sheds light on extent of housing bubble fraud"

The Economist, February 2013, "Bubbles and fraud: A smoking gun?"

Bloomberg Businessweek, September 2012, "Romney's housing plan looks a lot like Obama's"

Philadelphia Inquirer, September 2012, "On the House: U.S. approach to easing foreclosures a

disappointment"

Chicago Tribune, September 2012, "Mortgage servicers dropped the ball, study says"

CBS News, September 2012, "Special servicers: Answer to mortgage industry woes?"

MSN Money, September 2012, "Did bank delays cause 800,000 foreclosures?"

Washington Post, September 2012 "Housing crisis remains untamed, but party platforms pay little attention to solutions"

CBS News, September 2012, "Study: Home modification program falls short"

Consumerist, September 2012, "Study says 800K homeowners should've avoided foreclosure but big banks messed it all up"

Atlantic, September 2012, "800,000 American could have avoided foreclosure"

Huffington Post, September 2012, "Bank's disorganization pushed 800,000 homeowners into unnecessary foreclosure"

ProPublica, September 2012, "Foreclosure fail: Study pins blame on big banks"

Wall Street Journal, September 2012, "Paper: Why Obama's loan modification program fell short"

The Niche Report, September 2012, "Government foreclosure rescue efforts fall short"

Bloomberg Businessweek, September 2012, "Democrats (almost) silent on housing at the convention"

Bloomberg Businessweek, August 2012, "Putting numbers to HAMP's limited impact"

Bloomberg, May 2012, "Principal reductions won't solve the mortgage mess"

Wall Street Journal, April 2012, "Is mortgage-debt forgiveness worth the 'moral hazard'

Morningstar, August 2011, "Not so fast, or so simple"

DSNews, July 2011, "Modifications and strategic behavior: A Countrywide case study"

The Atlantic, June 2011, "Mortgage modification program encourages default"

HousingWire, May 2011, "Watch for strategic defaulters, economists suggest after studding Countywide data"

Reuters Blog, November 2010, "The three monkeys of mortgage bonds"

Hedge Fund Law Report, May 2009, "Consequences of the mortgage loan servicer safe harbor for hedge fund invested in securities backed by primary mortgages"

Seeking Alpha, March 2009, "Constitutional issues in nationalization and the economic rescue plan"

Seeking Alpha, March 2009, "How to modify securitized mortgages"

Wall Street Journal, February 2009, "Proposal is heavy on incentives to modify loans"

The Atlantic, February 2009, "The good and gad in Obama's housing plan"

CNBC, February 2009, "Fixing foreclosures: Lots of plans, murky strategy"

The Atlantic, February 2009, "How to save the housing market"

CNBC, January 2009, "Fixing foreclosures: How far are we going"

Business Week, January 2009, "Mortgage crisis: Will loan modifications bring relief"

Time Magazine Blog, January 2009, "Some more thoughts on how to fix the housing crisis"

HousingWire, January 2009, 'Columbia profs tackle loan mods"

Los Angeles Times, January 2009, "Loan servicers should get incentives to modify mortgages, experts say"

DSNews, January 2009, "Proposal calls for servicer incentives"

WYNC, January 2009, "Why servicers matter"

San Diego Source, January 2009, "FDIC plan called too expensive"

Los Angeles Times blog, January 2009, "Columbia profs: Incentivize servicers to modify mortgages"

Reuters, January 2008, "Pay lenders to stem foreclosures: report"

Chicago Tribune, November 2007, "Forewarned is fore-ARMed"

Business Week Magazine, October 2007, "In praise of a 'toxic' loan"

Blogging Stocks, September 2007, "Academics say ARMs are the best mortgages?"

The Consumerist, September 2007, "The optimal mortgage for the rational borrower"

Business Week, September 2007, "Surprise: 'Toxic' mortgages are the best"

#### **Expert Commentary to the Media:**

Wall Street Journal, New York Times, Bloomberg Businessweek, Reuters, Associated Press, National Public Radio, Washington Post, San Francisco Chronicle, New York Observer, The Nation, CNBC, The Star Ledger, The Real Deal, Investment News, Property Magazine, Financial Planning, De Tijd, ARD Network, Japan Broadcasting Corporation (NHK)

#### **Outside Activities:**

Independent Director, Board of Directors, DBRS, Inc., 2019-2020 Independent Director, Regulatory Governance Board, Morningstar Credit Ratings, 2017-2020 Consultant, Sidewalk Labs, 2020, 2021